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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/832,660	04/11/2001	Eddie Daems	210484	1837

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EXAMINER

SAGAR, KRIPA

ART UNIT	PAPER NUMBER
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1756

DATE MAILED: 03/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/832,660

Applicant(s)

DAEMS ET AL.

Examiner

Kripa Sagar

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed on 12/30/02 has been entered.
2. Since only punctuation errors have been corrected, no new matter has been added. Claims 20-38 are under consideration.
3. In view of the amendment and arguments all rejections presented in the last office action are withdrawn.

Claim Rejections - 35 USC § 112

4. Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim recites a limitation "wherein steps (a) to (d) are performed within a period of less than two months". It is not clear if the claim refers to extensive rest periods between *any two* steps in the sequence (a) through (d). Though the specification refers to this period, it does not provide any clarification to the limitation. For the purposes of examination it is assumed that the shelf life refers to storage after lamination conventionally known in the art.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 20,21, 27-33,35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. 5262275 to Fan in view of US Pat. 6143470 to Nguyen et al.

The instant claims disclose a method of forming a relief image using an imaging element on a UV-sensitive relief-forming layer. The imaging element, with a peelable layer, is imaged. The element is used as a conformable mask to expose the UV - sensitive layer and developing it to form the relief image.

Fan discloses a flexographic printing element comprising a barrier layer and an infrared (IR) sensitive imaging layer on a photo-polymerizable layer. Fan teaches laminating the barrier layer and the IR-sensitive layer on the photo-polymerizable layer. The IR-sensitive layer is image-wise exposed by laser ablation. The photo-polymerizable layer is flood exposed using the layers above as mask. The overlying layers and the non-imaged areas are developed and removed. (2;34-45). A temporary coversheet on the photo-polymerizable layer (if present) is removed prior to lamination(8;27-40). A peelable top layer is optionally included. This top layer on the IR

Art Unit: 1756

sensitive layer may remain on the laminated composite for storage but is removed prior to imaging by laser ablation. Fan teaches composition of IR sensitive layers (claims 22-23) and includes metals(5; 56-7-45). The top peelable layer(claims 27,32) is a silicone coated mylar layer (15;9-10). A separate development step for removing the IR-sensitive layer and the barrier layer is disclosed (10;51-56). The UV-sensitive material (claims 33,35) may be a photoresist ("photocrosslinkable") or a flexographic ("photopolymerizable") precursor (3;1-10). Fan specifies a barrier layer which is adhered to the UV-sensitive layer by pressure or heat or both. It teaches a peelable protective sheet over the barrier layer (7;66-8;10). Fan teaches that the laminated element may be stored (7;48-50).

Fan provides for a laminated imaging material and does not teach a distinct adhesive layer between the image receiving layer and the UV-sensitive layer.

Nguyen (Fig.3) teaches that an adhesive material (303) would be required when laminating an image-receiving layer (305) to a photosensitive layer (302).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an adhesive layer between the image receiving layer and the photosensitive layer as taught by Nguyen in Fan's lay-up because Nguyen teaches that the adhesive layer facilitates peeling after processing (8;66-67 & Fig.3).

6. Claims 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen in view of Fan.

Nguyen teaches laminating an image receiving layer and an adhesive layer onto a UV-sensitive layer on a support. The imaging layer is image exposed to ablative laser writing, and the stack is flood exposed and developed (Fig.3).

Nguyen does not teach a peelable top support or storage for two months.

Fan teaches a peelable top support and states that the laminate can be stored with the support (8;51-60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nguyen's stack with Fan's peelable support layer because Fan teaches that it protects the imaging layer from scratches during handling and storage (8;51-60).

7. Claims 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fan in view of Nguyen as applied to claim 20 above in view of US Pat.5888712 to Lelental et al.

The instant claims recite the limitations on the imaging layer in the mask.

The teachings of Fan and Nguyen have been discussed above. Fan and Nguyen teach the composition of the imaging layer ; however these are directed towards a laser-ablatable process. They do not specify other imaging methods or elements.

Lelental's invention is directed towards forming a conductive layer over imaging layers used in fabricating printing plates. It teaches conventional image forming layers and methods. Such imaging elements include, for example, photographic, thermographic, electrothermographic, photothermographic, dielectric recording, dye migration, laser dye-ablation, thermal dye transfer, electrostatographic, and

Art Unit: 1756

electrophotographic imaging elements (12;34-48).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Lelental to include diverse imaging elements in the mask-forming layer taught by Fan with Nguyen's adhesive layer, because Fan teaches the advantages of integrating the mask ("phototool") with the relief-forming layer (1;49-65) and Nguyen teaches a practical method of integration while Lelental teaches numerous image forming elements conventionally available for use in the integrated mask.

8. Claims 34, 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fan in view of Nguyen as applied to claim 20 above in view of US Pat.4555471 to Barzynski et al.

The claim recites the limitations on the UV sensitive material and peeling off the mask layer as a development step.

The teachings of Fan have been discussed above. It teaches the precursors for a flexographic printing plate. It does not teach the relief layer for a lithographic plate. It teaches laser ablation to image the mask layer (IR-sensitive layer) and provides for development steps to remove the mask layer. It does not teach peeling the mask layer. Nguyen teaches peeling the image forming stack after exposure. It does not teach a flexographic printing plate.

Barzynski's invention is directed towards a multilayer image recording material used in printing plates. It teaches prior art structures for lithographic printing plates (1; 20-26). It teaches the use of thermographic materials in the imaging layer of the mask.

Art Unit: 1756

The mask layers and the relief imaging layers are formed separately and laminated.

Following the imaging process, the mask layers may be peeled off (7;54-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Barzynski Nguyen and Fan. Fan teaches the advantages of integrating the mask ("phototool") with the relief-forming layer (1;49-65), Nguyen teaches a practical method of integration, while Barzynski teaches that this can be accomplished with a peelable mask that dispenses with the wet processing steps (generally associated with other masks), thereby assuring good quality images during processing (8;57-65).

Response to Arguments

9. Applicant's arguments with respect to claims 20 – 38 have been considered but are not relevant in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kripa Sagar whose telephone number is 703-605-4427. The examiner can normally be reached on 8:00AM--5:00PM (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark F Huff can be reached on 703-308-2464. The fax phone numbers for

Art Unit: 1756

the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

A handwritten signature in black ink, appearing to read "Mark F. Huff", with a long horizontal flourish extending to the right.

MH/ks
February 25, 2003

**MARK F. HUFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700**